U.S. Geological Survey New York Water Science Center – http://ny.usgs.gov

Message from the Director, Rafael W. Rodriguez

A decision was made recently to change the names of all USGS Districts to USGS Water Science Centers. So we are now the USGS New York Water Science Center. Although we have a new name our offices and operations are still the same. But there is one thing new, besides our name, this letter! These summaries will be distributed periodically throughout the year to help us communicate the availability of various information products and to keep our stakeholders informed of USGS activities in New York. Our plan is to keep the text brief, but with web links to sources of additional information. **To receive future issues of this letter you must subscribe, as explained in "To SUBSCRIBE," at the bottom.** We are interested in your suggestions on how to improve this summary or the way we provide information to you. Please send suggestions to askny@usgs.gov or contact me directly at rrodrigu@usgs.gov.

The USGS Water Resources Discipline (WRD) has the principal responsibility within the Federal Government to provide the hydrologic information and interpretation needed by others to achieve the best use and management of the Nation's water resources. WRD actively promotes the use of its information products by decisionmakers to:

- Minimize loss of life and property as a result of water-related natural hazards, such as floods, droughts, and land movement.
- Effectively manage ground-water and surface-water resources for domestic, agricultural, commercial, industrial, recreational, and ecological uses.
- Protect and enhance water resources for human health, aquatic health, and environmental quality.
- Contribute to wise physical and economic development of the Nation's resources for the benefit of present and future generations.

If you have an environmental or resource-management issue in which you would like to partner with the USGS to investigate, please contact any of our senior management staff (listed below). Projects are supported primarily through the Cooperative Water Program. This is a program through which any State, County, or local agency may work with the USGS to fund and conduct a monitoring or investigation project.

Strategic Review

– The USGS New York Water Science Center recently held its once-every-five-years, strategic review. The Center hosted staff from USGS Regional Offices and Headquarters as well as selected cooperators that were able to participate. Many of you answered questionnaires or participated in strategic discussions, over the last 6 months; contributing your thoughts and ideas about emerging environmental resource issues as well as ways the USGS can better serve your needs.

Based on your comments, we have updated our 5-year Strategic Science Plan. While we could not incorporate all of your ideas in the actual plan, we are working to address them. For example, many of you suggested we produce a periodic summary to keep everyone informed of the work we are doing. You are reading the premier issue.

Selected Projects

– For information on all our active projects, visit our project summary web page. In each of these summary letters we will highlight a few ongoing projects that may be of interest to the public and our stakeholders.

NEW: Ground-water availability and quality in the Fire Island National Seashore

The USGS, in cooperation with the National Park Service, is conducting a study to characterize the shallow ground-water system on Fire Island, a barrier island along the southern coast of Long Island. This study will help to calculate ground-water flow rates, estimate the rate of submarine discharge from the ground-water system to the ocean, evaluate the quality of ground water in this system, and estimate the nutrient loads being discharged from ground water to the ocean and back-barrier estuaries. Contact: Christopher Schubert (631) 736-0783, schubert@usgs.gov.

Does Rockland County Have Enough Ground Water?

The USGS, in cooperation with Rockland County and the New York State Department of Environmental Conservation, is conducting a study to evaluate (1) whether current ground-water-withdrawal rates are depleting the aquifers, (2) whether rainfall and pumpage data provide a sufficient basis for estimating sustainable water use, (3) the rates of aquifer recharge, and (4) what surface-water sources (streamflow, leaking sewers, recharge areas) are contributing ground water to the supply wells. Contact: Paul Heisig (518) 285-5648, pmheisig@usgs.gov.

Hydrogeology of a Ground-Water-Contamination Site

The USGS is working closely with the U.S. Environmental Protection Agency to characterize the hydrogeology of part of Cayuga County in which a contaminant plume has been identified. This information is needed to estimate the distribution and movement of the contaminant plume. This study is being done, in part, through the USGS borehole geophysical research group at the USGS New York Water Science Center. Contact: David Eckhardt (607) 266-0217, daeckhar@usgs.gov.

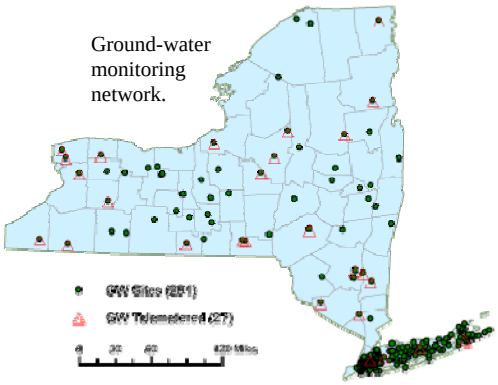
Hydrologic Conditions

Flooding in April – In early April, significant rain fell across New York causing severe flooding in some locations. Fourteen counties in New York had severe flooding and damage from the April 2-3 storms. Most of these counties were declared federal disaster areas. Record flows were measured at 19 USGS gaging stations in the Hudson, Delaware, Susquehanna, and Oswego River basins. Seven of these stations had greater than 100-year recurrence interval floods (*a 100-year flood is a flood that has 1 percent chance of being equaled or exceeded in any year*). The seven sites were: Esopus Creek at Mount Marion, Beaver Kill at Cooks Falls, East branch Delaware River above Read Creek at Fishs Eddy, Neversink River at Neversink, Neversink River at Godeffroy, Otselic River at Cincinnatus, and Owasco Outlet at Auburn.

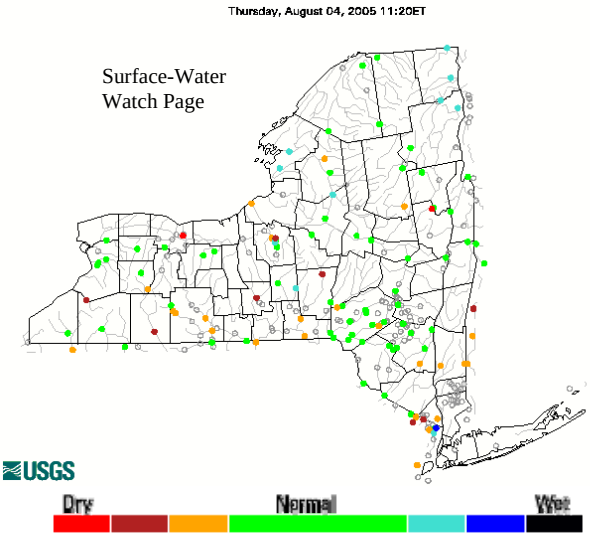
The ground-water-monitoring network in upstate New York will have a total of 70 continuous monitoring wells (48 screened in glacial drift and 22 finished in bedrock, by April), thanks to efforts of the New York State Department of Environmental Conservation and the USGS. Of those 70 wells, 26 are instrumented with telemetry to provide near-real-time water-level information. Twelve wells were installed in the last 6 months and are listed below.

NEW!

Dutchess County Du-321
Herkimer County He-627
Schenectady County Sn-730
St. Lawrence County St-404
Putnam County P-1217
Schoharie County So-602
Warren County Wr-80
Franklin County F-854
Franklin County F-60
Niagara County Ni-70
Tomkins County Tm-985
Ulster County U-1620



Long Island has an extensive ground-water-monitoring network funded by several agencies, including Nassau and Suffolk Counties and the New York City Department of Environmental Protection. The Long Island ground-water-monitoring network consists of 29 continuous (hourly) recording wells (3 of which include telemetry), 199 wells that are monitored monthly, and 318 wells that are monitored yearly. Our web page displays real time and historic ground-water data for these and other wells. Another useful resource for data on hydrologic conditions in New York and the rest of the country is the USGS ground-water watch page.



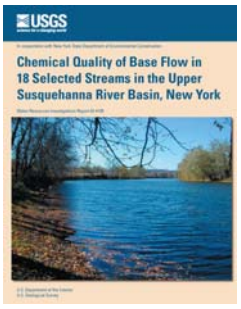
The USGS surface-water monitoring program in New York contains 373 sites at present, 237 of which are streamflow sites with continuous (15-minute) discharge and stage recording; 252 of the 373 sites include telemetry to provide near-real-time data. This network is supported by several cooperating agencies and the USGS. Our web page displays real time and historic data; visit the surface-water-watch page for hydrologic conditions across the country; and the Center's end-of month report for a summary of hydrologic conditions in the State.

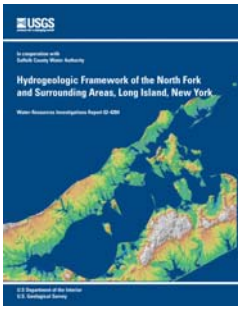
NEW! One new streamflow gage was installed in New York in the last 6 months -- Indian River below Lake Abanakee.

Discontinued Monitoring Sites

Two sites were discontinued in the last 6 months—Great Brook below Victor (04234232, operated from November 1993 through September 2004) and Virgil Creek at Dryden (0423368620, operated from October 2002 through September 2004). If you are interested in providing funding to help support these or other sites in the network, please contact Ward Freeman, wfreeman@usgs.gov.

Selected Reports – visit our publications search page for other New York publications. Listed below are some of the most recent publications.





- Burns, D. A., Plummer, L. N., McDonnell, J. J., and others, P., 2003, The geochemical evolution of riparian ground water in a forested piedmont catchment: Ground Water, v. 41, no. 7, p. 913-925. Details
- Butch, G. K., Murray, P. M., Lumia, Richard, and Corse, M. D., 2004, Water resources data, New York, water year 2003, volume 1, eastern New York, excluding Long Island: U.S. Geological Survey Water-Data Report NY-03-1, 579 p. Details
- Cartwright, R. A., 2004, Occurrence of arsenic in ground water of Suffolk County, New York, 1997-2002: U.S. Geological Survey Water-Resources Investigations Report 03-4315, 11 p. Details
- Hetcher, K. K., Miller, T. S., and Komor, S. C., 2004, Chemical quality of base flow in 18 selected streams in the upper Susquehanna River Basin, New York: U.S. Geological Survey Water-Resources Investigations Report 03-4100, 42 p. Details
- Hornlein, J. F., Szabo, C. O., and Sherwood, D. A., 2004, Water resources data, New York, water year 2003, volume 3, western New York: U.S. Geological Survey Water-Data Report NY-03-3, 376 p. Details
- Randall, A. D. and Klusman, Kate, 2004, Analysis of minimally disruptive brief pumping tests of domestic wells completed in bedrock in the Appalachian Plateau of New York: U.S. Geological Survey Open-File Report 2004-1276, 8 p. [online only] Details
- Schubert, C. E., Bova, R. G., and Misut, P. E., 2004, Hydrogeologic framework of the North Fork and surrounding areas, Long Island, New York: U.S. Geological Survey Water-Resources Investigations Report 02-4284, 23 p. Details
- Spinello, A. G., Busciolano, R. J., Pena-Cruz, G. P., and Winowitch, R. B., 2004, Water resources data, New York, water year 2003, volume 2, Long Island: U.S. Geological Survey Water-Data Report NY-03-2, 304 p. Details

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